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OUTLOOK & SITUATION

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Summary

Smaller supplies and rising demand this fall are expected to keep fruit prices above a year earlier. The early September forecast for 1984 noncitrus production was 12.5 million tons, down fractionally from last year. Fall supplies of noncitrus fruit are likely to be smaller than a year earlier. The U.S. apple crop is forecast at 8.33 billion pounds, up only fractionally from last year. Smaller crops are expected for grapes, down 8 percent, and pears, down 11 percent, from 1983. Small supplies of citrus fruit are also possible because of the December freeze, which damaged citrus trees in Florida and Texas; in addition, the infestation of citrus canker in Florida will have an as yet undetermined effect on supplies. With the continued good economy, demand for fruit will most likely continue to rise.

Although the 1984/85 canned fruit pack is expected to be up for some items, depleted stocks will still result in small supplies for most canned fruit. Contract prices for most major fruits are reported moderately to substantially higher than last season's. Consequently, small supplies, combined with a higher cost of fruit, will keep prices for most canned fruit strong.

California grape production is expected to be down moderately; however, the output of raisins will probably still be relatively large. Thus, heavy raisin carryin stocks at the beginning of the 1984/85 season will result in ample supplies and lower prices. The smaller 1984 prune crop, coupled with reduced carryin stocks, will leave a total supply of dried prunes moderately less than last season's. Overall, dried fruit supplies should be adequate to ample.

Lower prices have reduced deliveries of strawberries to freezers as more strawberries are sold fresh at higher prices. However, with larger carryin stocks and imports, mostly from Mexico, supplies of frozen strawberries should be adequate. The sharply larger tart cherry crop will result in heavy supplies of frozen tart cherries. Grower prices for tart cherries offered by processors are well below a year earlier. Supplies of most other frozen fruit and berries are likely to be adequate. Overall, the total supply of frozen fruit and berries will be ample which, coupled with lower costs of crops, may weaken prices.

As a result of the December freeze in Florida and Texas, on-tree returns for citrus have averaged sharply higher than a year ago. Prices of most processed citrus items have also been strong because of reduced supplies and relatively good demand. The sharply smaller Florida orange crop and a reduced juice yield resulted in a sharply decreased pack of frozen concentrated orange juice (FCOJ). Imports have been heavy, but smaller carryin stocks and the reduced pack still will result in a total supply of FCOJ well below a year earlier. Even with higher prices, movement has been relatively good, with carryover likely to be well below last season's. If another small citrus crop materializes in 1984/85, supplies of citrus products are not expected to increase appreciably. Consequently, small supplies will keep prices of citrus products firm.

Supplies of tree nuts should be adequate to ample during 1984/85, with larger crops reported so far for all tree nuts except pecans. Demand is expected to be relatively good, and prices are expected to be lower than last year. Preliminary estimates indicate that the per capita consumption of all tree nuts was 2.29 pounds, up substantially from 1982, primarily reflecting the large increase in walnut consumption.

GENERAL PRICE OUTLOOK

With the continued strengthening of prices for apples, lemons, peaches, and oranges, grower prices for fruit have advanced. The August index of grower prices for fresh and processing fruit, at 246 (1977 = 100), is 55 percent above a year earlier. However, prices are expected to decline this fall because of seasonally increased supplies of apples, pears, and citrus. Nevertheless, prices are still likely to remain above a year ago because demand will probably continue to rise and noncitrus fruit supplies will be down this fall. In addition, citrus fruit prices are likely to remain relatively high this fall because the 1984/85 citrus crop could be smaller, a result of the December freeze damage to citrus trees in Florida and Texas.

Retail prices of fresh fruit continued to rise in July. The Bureau of Labor Statistics (BLS) consumer price index for fresh fruit, 346.9 in July, was up 1 percent from June and 6.2 percent from a year earlier. Higher prices for apples and oranges continued to dominate the increase. As supplies of apples and citrus will increase seasonally this fall, retail prices of fresh fruits will fall. Nevertheless, rising demand and small supplies will keep prices higher than a year earlier.

Retail prices of processed fruit have steadily increased. The July index of processed fruit prices, reported by the BLS at 163.6, was 8.6 percent higher than last year.

Supplies of processed noncitrus fruit will be mixed during the 1984/85 season. Even though the canned fruit pack is expected to be up for some items, the depleted stocks will result in small supplies for most canned fruit. Consequently, prices are expected to remain firm. In contrast, supplies of dried fruit, particularly raisins and prunes, will be adequate to ample; raisin prices will be lower than a year ago.

Table 1.—Index of annual and quarterly prices received by growers for fresh and processing fruit, 1981-84

Year	Annual	1st	2nd	3rd	4th
1977=100					
1981	130	119	123	135	142
1982	175	137	151	248	164
1983	126	129	128	127	122
1984		129	166	¹ 227	

¹Two-month average.

SOURCE: Agricultural Prices, SRS, USDA.

Table 2.—Annual and quarterly consumer price indexes for fresh fruit, 1981-84

Year	Annual	1st	2nd	3rd	4th
1967=100					
1981	278	256	276	302	279
1982	309	289	322	333	293
1983	296	274	301	324	285
1984		295	321	¹ 347	

¹July's figure.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

Lower prices have reduced deliveries of strawberries to freezers as more strawberries are sold fresh at higher prices. However, with larger carryin stocks at the beginning of the season, supplies of frozen strawberries should be adequate for market demand. The sharply larger tart cherry crop will result in increased supplies of frozen tart cherries. Supplies of most other frozen fruit and berries are likely to be adequate this season. Thus, the total supply of frozen fruit and berries will be ample. These supplies and the lower cost of fruit and berries will weaken prices.

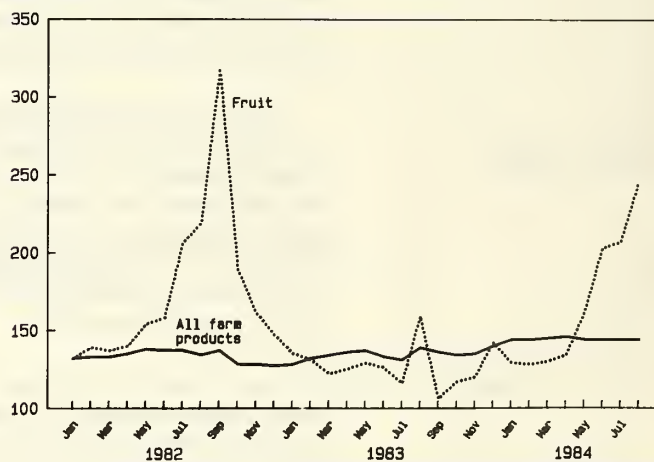
Prices of most processed citrus items have been strong because of reduced supplies and relatively good demand. Supplies are not expected to increase appreciably because of prospects for the small 1984/85 citrus crop and lower carryin stocks. Consequently, prices should remain firm.

NONCITRUS

The early September forecast for 1984 noncitrus production was 12.5 million tons, down fractionally from last year. Fall supplies of fresh noncitrus are expected to be smaller than a year earlier, reflecting smaller grape and

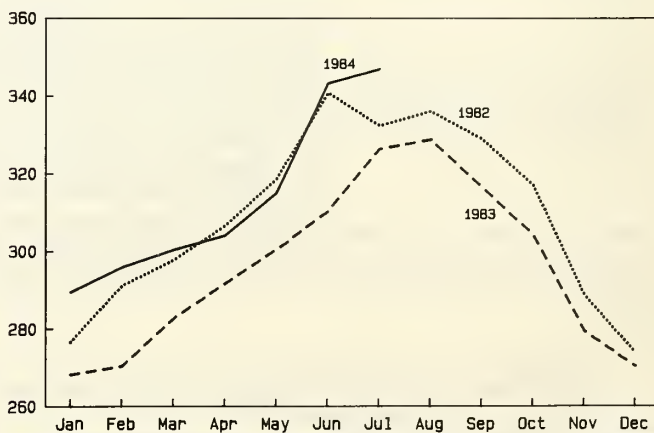
Prices Received by Producers, Fruit and All Farm Products

1977=100



Fresh Fruit: BLS Consumer Price Index

% of 1967



pear crops and only fractionally larger apple production. Thus, smaller supplies combined with rising demand will keep prices of fresh noncitrus fruit above a year earlier.

Canned Fruit: BLS Wholesale Price Index

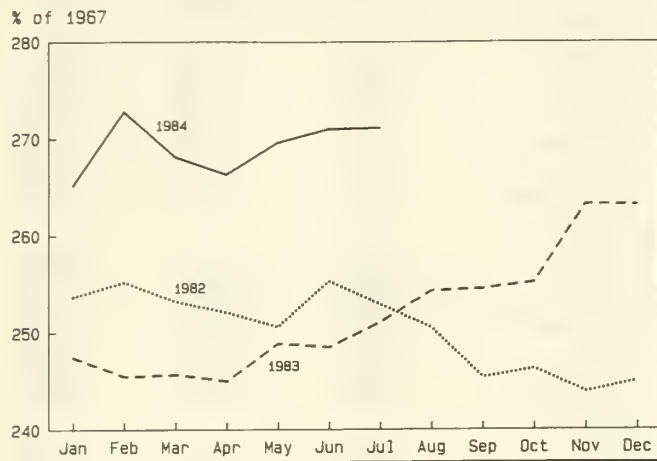


Table 3.—U.S. noncitrus fruit: Total production, 1982, 1983, and indicated 1984

Crop	1982	1983	1984
1,000 tons			
Apples	4,058	4,157	4,167
Apricots	114	95	124
Cherries, sweet	156	180	181
Cherries, tart	155	77	154
Grapes	6,554	5,494	5,031
Nectarines	178	186	170
Peaches	1,147	895	1,273
Pears	804	775	688
Plums and prunes	588	684	683
Total	13,754	12,543	12,471

SOURCE: Crop Production, SRS, USDA.

Table 4.—Frozen fruit and berries cold storage holdings, June 30, 1982-84

Commodity	June 30		
	1982	1983	1984
1,000 pounds			
Apples	52,238	53,139	57,785
Apricots	6,406	10,477	13,355
Cherries	28,548	21,729	17,687
Grapes	2,957	3,897	5,259
Peaches	24,935	22,327	13,699
Blackberries	12,490	8,131	4,601
Blueberries	5,910	9,267	33,841
Boysenberries	4,752	2,333	2,630
Raspberries, Red	4,921	18,798	9,555
Strawberries	133,216	225,133	213,656
Other fruits and berries	75,096	95,233	79,404
Total	351,469	470,464	451,472

SOURCE: Cold Storage, SRS, USDA.

Apples

Fractionally Larger Crop Expected

At 8.33 billion pounds, the early August forecast for the Nation's apple crop was only fractionally larger than last year's crop. The forecast shows a mixed pattern in the major producing areas, with increased production in the Eastern and Central States more than offsetting decreased production in the Western States. Production in the Eastern States is forecast at 3.29 billion pounds, up 2 percent from 1983. New York, the region's leader, is expected to harvest 1.06 billion pounds, down 4 percent from last year. The crop in the Central States, forecast at 1.27 billion pounds, is 7 percent more than 1983. Michigan, the No. 1 State in the region, expects a crop of 800 million pounds, up 7 percent from 1983. The Western States expect 3.77 billion pounds, 3 percent less than 1983; Washington, the Nation's leading producing State, saw a lighter set. Fruit size is expected to be smaller than in 1983; the crop is estimated at 2.9 billion pounds, down 3 percent from last year. Oregon has a poor set, while fruit size and quality are good in California.

Use for 1983 Crop Mixed

Because of the larger apple crop and reduced supplies of fresh oranges, the quantity of apples sold fresh was up 2 percent from 1982. Nevertheless, the proportion consumed as fresh was still down slightly from 1982. Primarily reflecting rising demand for apple juice, more apples were used for processing. Of the 3.7 billion pounds used for processing, apples for juice and cider increased in both absolute and relative terms. With 8 percent more apples used for juice and cider, the share of processing apples used for this product increased from 51 percent in 1982 to 52 percent in 1983. Apples used for drying increased 23 percent from 1982. On the other hand, larger supplies of frozen strawberries resulted in a substantial reduction in the quantity of apples used for freezing. Apples used for canning showed decreases of 3 percent; other products—including vinegar, wine, jam, and fresh slices for pie filling—showed decreases of 20 percent.

Grower Prices Up

Rising demand and smaller supplies of fresh oranges pushed the 1983 season average price received by growers for fresh apples substantially above the 1982 season. The estimated grower price for fresh apples averaged 14.9 cents a pound, compared with 13.2 cents for the 1982 crop. In contrast, grower prices for processing

Table 5.—Apples: Regional production, 1982, 1983, and indicated 1984

Area	1982 ¹	1983 ¹	1984
Billion pounds			
East	3.17	3.23	3.29
Central States	1.47	1.19	1.27
West	3.48	3.89	3.77
Total U.S.	8.12	8.31	8.33

¹Includes unharvested production and harvested not sold (million pounds): United States: 1982—13.8, 1983—21.1.

SOURCE: Crop Production, SRS, USDA.

apples in 1983 averaged \$104 a ton, down 12 percent from 1983. Overall, the average apple price for all sales was 10.6 cents a pound, compared with 10 cents for the 1982 crop.

Grower prices for fresh apples have been above a year earlier every month since August 1983. The August 1984 price, at 18.3 cents, was 27 percent higher than a year earlier. Apple supplies available for fresh market may be slightly less than last season because of the smaller Washington crop. Domestic demand for fresh apples should remain good if the 1984/85 citrus crop stays small. However, the export outlook for 1984/85 is not very encouraging because the U.S. dollar will probably continue strong, and a larger apple crop is reported for Western Europe. With smaller available supplies and a good domestic market, fresh apple prices may remain relatively higher this season than last.

Processor demand for this year's apple crop looks promising in view of good demand for canned apple items and reduced stocks. Consequently, the larger apple production in the Eastern and Central States is not likely to exert downward pressure on apple prices for processing use. For this year's apple crop, the Michigan Processing Apple Grower Marketing Committee recently recommended to processors a minimum base price moderately above last year.

Exports Weak, Imports Strong

With sharp decreases in almost all major markets, U.S. fresh apple exports of 222,360 metric tons during 1983/84 (July-June) were down 19 percent from the previous year; higher prices and the strong U.S. dollar are probably responsible. Canada, the United States leading customer, reduced its purchases by 9 percent. Shipments to Taiwan, the second largest customer, were down 40 per-

Table 6.—Processed apples: Season-average price per ton received by growers, by type of use, principal States, 1981-83

Use and State	1981	1982	1983
<i>Dollars</i>			
Canning:			
Michigan	145.00	127.00	124.00
New York	138.00	124.00	116.00
Pennsylvania	119.00	135.00	119.00
Virginia	129.00	131.00	106.00
Washington	87.00	145.00	112.00
West Virginia	128.00	134.00	118.00
United States	121.00	132.00	117.00
Juice and cider:			
California	59.00	133.00	120.00
Michigan	120.00	86.00	94.00
New York	110.00	95.00	84.00
Pennsylvania	93.00	102.00	84.00
Virginia	104.00	101.00	78.00
Washington	65.00	112.00	85.00
United States	87.90	103.00	89.00
Frozen:			
Michigan	162.00	144.00	180.00
New York	178.00	134.00	138.00
United States	160.00	143.00	161.00
Dried:			
California	80.00	134.00	156.00
New York	134.00	118.00	130.00
United States	77.10	132.00	106.00

SOURCE: Noncitrus Fruits and Nuts Mid-Year Supplement, SRS, USDA.

cent. Hong Kong, one of the major customers in the Far East, bought 14 percent less this season. In contrast, larger purchases were recorded for Europe as increased shipments to the Netherlands, the United Kingdom, Ireland, and Sweden more than offset decreased sales to Finland, Norway, and France.

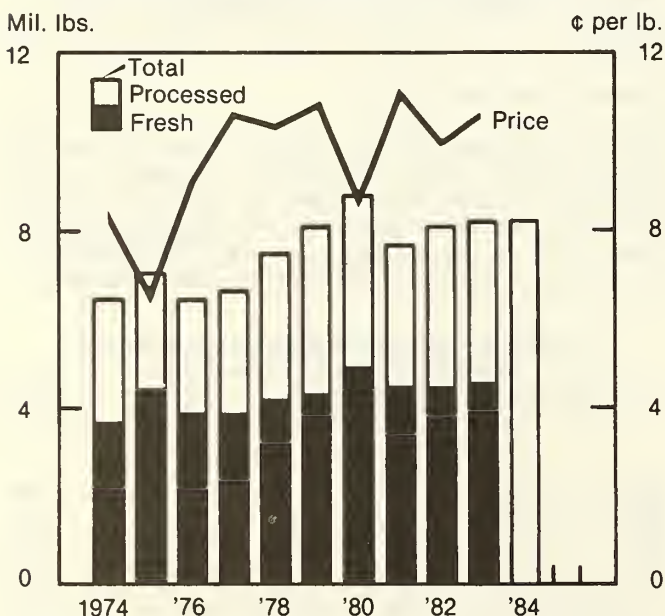
Largely because of rising demand, U.S. imports of fresh apples during the first 10 months of 1983/84 (October-July) were 23 percent above a year earlier. Canada, the United States principal supplier, shipped 33 percent more apples. Imports from Chile also showed a strong gain, up 80 percent. Another gain was reported for New Zealand, but decreased purchases were indicated for France and South Africa.

Avocados

Certified shipments of 1.2 million bushels of Florida avocados are forecast for the 1984/85 season, up 16 percent from 1983/84. If the forecast is realized, it would be the second largest crop. The increase partially reflects the continued expanded acreage. In 1984/85, the bearing acreage totaled 11,000, compared with 10,800 the previous season.

Harvest of early varieties is well underway, and the volume is expected to be larger than in 1983/84. Shipments through July totaled 108,400 bushels, up 59 percent from a year earlier. Because of larger shipments, f.o.b. prices have been under downward pressure. In early September, a flat carton of 9-14s was quoted at \$3.38, compared with \$4.25 a year earlier. With remaining shipments running substantially larger than a year earlier,

U.S. Apple Production, Utilization and Prices



Utilized production. Season-average grower prices.
1984 indicated total production.

Table 7.—Avocados: Acreage, production, yield per acre, 1979/80-1983/84 seasons

Season ¹	Acreage			Production	Yield per bearing acre
	Bearing	Non- bearing	Total		
	1,000 acres	1,000 acres		1,000 tons	Tons
California:					
1979/80	45.1	13.2	58.3	75.0	1.66
1980/81	59.5	16.3	75.8	238.0	4.00
1981/82	65.7	14.5	80.2	157.0	2.39
1982/83	68.0	9.0	77.0	202.0	2.97
1983/84 ²	72.3	5.2	77.5	218.0	3.02
Florida:					
1979/80	8.3	2.2	10.5	27.3	3.29
1980/81	9.1	1.9	11.0	30.8	3.38
1981/82	9.3	2.3	11.6	25.8	2.77
1982/83	10.0	1.8	11.8	34.7	3.47
1983/84 ²	10.8	1.4	12.2	27.0	2.50

¹Season for California November 1-October 31; for Florida late June-February. ²Preliminary.

SOURCES: California and Florida Crop and Livestock Reporting Services.

er, prices are expected to remain lower through the season. The 1983/84 average price received by Florida growers for avocados was \$460 a ton, compared with \$480 the preceding season.

Shipments of California's 1983/84 avocado crop were estimated at 9.3 million bushels by the California Avocado Commission. This is 15 percent more than in 1982/83. Through the end of July, 78 percent of the crop had been shipped. F.o.b. prices have been well below a year earlier. In early September, the f.o.b. price for a two-layer tray pack carton of 32-36s was quoted at \$7.25 in southern California, down from \$9.00 a year earlier. With remaining supplies moderately below a year earlier, prices may strengthen somewhat. The 1983/84 average price received by growers for California avocados was \$440 a ton, down from \$460 the previous season.

Grapes

Moderately Smaller Crop Reported

On September 1, the U.S. grape crop was estimated at 5 million tons, down 8 percent from 1983. Smaller crops were reported for most major producing areas.

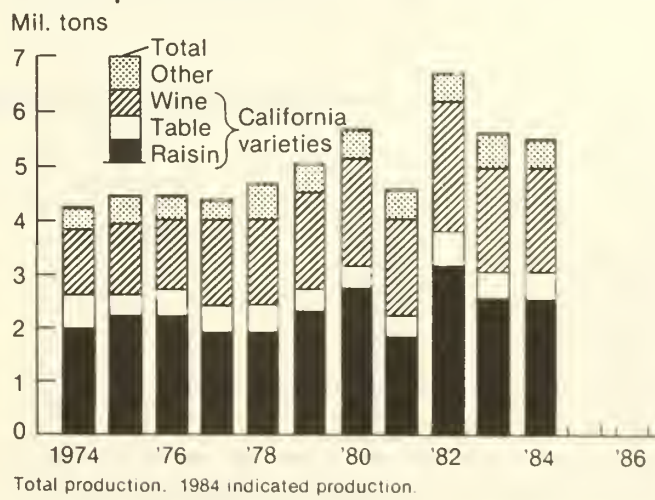
California, accounting for 89 percent of the crop, expects to harvest 4.48 million tons, down 8 percent from the 1983 crop. The hot weather and thunderstorms in some areas during August reduced the production potential of the August crop estimates by 8 percent. Raisin-type grape production is forecast at 2.25 million tons, a reduction of 10 percent from the August forecast and 11 percent below last year. Vineyards in the area suffered varying amounts of damage from slip skins, splits, and branch rots. Sugar levels, however, are running extremely high. Table-variety grape production is forecast at 430,000 tons, 7 percent below last month and 13 percent less than 1983. Production of wine-variety grapes is forecast at 1.8 million tons, a 5-percent drop from the August figure and 4 percent less than last year. Yields are significantly lower than expected, but quality is very good. Sugar levels are high due to the early maturity of the crop.

Production in other States is expected to show a mixed pattern, but the total will be down 6 percent from 1983. Washington, reversing the upward trend, expects a 14-percent reduction in its crop, down to 195,000 tons. The yield outlook for Concords is promising. Cluster and berry counts are above average, but lower than 1983 which was a record high year. Wine varieties were damaged by early frosts in September 1983, record cold temperature in December, and abnormally cool weather this spring. The forecast for the New York crop is 195,000 tons, 2 percent above last year. Fruit sets are above normal and their condition is good. Concord berry counts and weight are virtually the same as for the 1983 crop. In contrast, larger grape crops are indicated for most minor producing States.

Prices Mixed

Because of early maturity, shipments of fresh table grapes were running well above last year's pace. Opening f.o.b. prices at shipping points were substantially higher than a year ago, but prices have declined with

U.S. Grape Production



increased volume. In mid-September, f.o.b. prices for Thompson Seedless in the Kern District, California, were quoted at \$11.00 a 23-pound lug, compared with \$10.00 a year ago. The use of table grapes for fresh market may be larger this year because the market for competing uses of multipurpose varieties, particularly Thompson Seedless, is expected to be weak. Nevertheless, the reduced competing uses of multipurpose varieties may still hold prices relatively well because demand for fresh table grapes is rising.

With smaller grape crops, particularly in New York and Washington, decreased crushing is expected. In California, the quantity of grapes crushed for wine through late August was sharply above a year earlier because of the early maturity. However, the total quantity of grapes crushed for wine for 1984 is likely to decline from last year. Even with reduced inventories, supplies of California wine will still be ample because of the increased imports. According to the Wine Institute, inventories of U.S. wine stood at 522 million gallons as of May 31, 9 percent below a year earlier. Demand for wine is rising slightly, with total California wine shipments through June up 1 percent from a year earlier. In response to the slower rate of increase in shipments, prices have generally been below a year earlier.

The BLS July consumer price index for all wine, at 232.5 (1967 = 100), was 2 percent below a year earlier. Current prices of California grapes crushed for wine are in a mixed pattern, depending on varieties and locations. The steady demand for wine and larger imports of foreign wines will probably keep wine prices relatively steady.

Although raisin shipments were up moderately during 1983/84, the carryover into 1984/85 is heavy. With increased imports of foreign wines and a reduced rate of increase in wine sales, wineries are not likely to bid actively for raisin grapes. As a result, the output of raisins will probably be relatively large. Thus, combined with the heavy carryin stock, larger raisin supplies could be expected. Prices of raisins for 1984 are expected to be substantially below last year. Large raisin supplies in the world market are also contributing to reduced raisin prices.

Nectarines

Smaller Crop Expected

The California nectarine crop is forecast at 170,000 tons, 9 percent less than 1983. Because the crop matured rapidly, harvest was completed by late August, with total shipments of fresh nectarines through late August running only fractionally behind last year's pace. Despite a smaller crop, f.o.b. prices were generally below a year earlier. The increased supplies of fresh peaches probably caused nectarine prices to fall. However, with seasonally reduced supplies, f.o.b. prices have strengthened to levels above a year earlier. In early September, the shipping point price of nectarines (sizes 60-64) was reported at \$9.00 a two-layer lug in the central and south San Joaquin Valley, compared with \$5.75 last year. But season-average prices received by growers will probably be below last year's \$300 a ton.

Peaches

Production Sharply Up

Peach production was forecast at 2.55 billion pounds in early August, 42 percent more than in 1983. Excluding California clingstone peaches, the U.S. crop is forecast at 1.56 billion pounds, up 33 percent from last year, mainly reflecting a sharply larger output from the nine Southern States. The August 1 forecast of California's clingstone crop, at 990 million pounds, is 60 percent above 1983.

The nine Southern States, where most of the peaches are harvested for the fresh market, are expected to produce 741 million pounds or two-and-a-half times the small 1983 crop. The South Carolina crop, at 440 million pounds and accounting for 60 percent of the total tonnage from the nine Southern States, is 363 percent greater than last season's. California's Freestone forecast of 440 million pounds is slightly more than 1983. Although the Freestone quality is good, fruit size is average to below average.

Table 8.—Nectarines: Acreage, production, yield per acre, 1977 to date

Season	Acreage			Production	Yield per bearing acre
	Bearing	Non-bearing	Total		
	1,000 acres				
California:					
1977	13.8	7.7	21.5	155.0	11.23
1978	14.7	8.9	23.6	148.0	10.07
1979	16.5	9.7	26.2	172.0	10.42
1980	18.4	9.0	27.4	191.0	10.38
1981	21.0	7.4	28.4	182.0	8.67
1982	22.2	2.4	24.6	178.0	8.02
1983 ¹	22.3	4.4	26.7	186.0	8.34

¹Preliminary.

SOURCE: California Crop and Livestock Reporting Service.

Prospective output in several of the States that grow a large quantity of late peaches showed a mixed pattern. New Jersey expects to harvest 35 million pounds, off 63 percent from 1983, while a crop of 45 million is forecast in Michigan, 29 percent above 1983. Pennsylvania, with an estimated crop of 85 million pounds, should be down 11 percent, but the Washington peach crop is forecast to be up 10 percent.

Prices Generally Lower

Peach shipments to the fresh market are running well ahead of last year's pace, mainly reflecting larger movement from South Carolina. Because of bigger supplies, f.o.b. prices for fresh peaches from Georgia and South Carolina were significantly below a year earlier. On the other hand, early-season f.o.b. prices for California peaches were near last year's, but have strengthened. In mid-September, f.o.b. prices for fresh yellow peaches, sizes 56-64 in the central and southern San Joaquin Valley, were quoted at \$6.50 a two-layer lug, compared with \$5.50 a year earlier. As supplies of peaches from the late States will most likely be light, prices are expected to strengthen further from the current levels.

Canned Supplies Light

With California's larger crop, the total pack of canned clingstone peaches is expected to be well above last year. Tonnage of clingstone peaches delivered to processors through early September totaled 502,453 tons, up 50 percent from last year. However, the stocks at the beginning of the season appear to be sharply below a year earlier. Thus, even with a larger pack in prospect, the total supply of canned peaches will be light during 1984/85.

The current f.o.b. prices are generally above last year's opening prices. The August BLS wholesale price index for canned peaches, at 322.7 (1967 = 100) a case (12-2-1/2's), is up 12 percent from a year earlier. Prices are likely to remain firm in view of higher contract prices for canning peaches and light supplies.

In addition to sharply smaller supplies, 1984/85 stocks of canned freestone peaches are the smallest in the last several years. Most of the 1984 pack will be coming from the California crop, which is only slightly larger than last year. With larger supplies of peaches for fresh market, there probably will be less diversion to fresh sales. Consequently, the pack of canned freestone peaches is likely to exceed last year's. The total supply of canned freestone peaches could be larger during 1984/85 than the preceding season.

Canned Exports Down

Canned peach exports during 1983/84 totaled 15,896 metric tons, down 56 percent from the previous season. Sharply reduced shipments were indicated for almost all countries. Canada, the leading customer, purchased 52 percent less, and Japan, the second largest market, 53 percent less. Generally weak markets were also reported in Europe. The strong U.S. dollar, sharply reduced supplies, and keen competition with other exporting countries are largely responsible for the decline in exports. Canned peach exports started slowly for 1984/85, with the exports for the first 2 months down 72 percent from a year earlier.

Pears

Crop Down Substantially

The final forecast for the 1984 pear crop, at 687,500 tons, was down 11 percent from last year. Bartlett tonnage in the three Pacific Coast States was forecast at 411,000, also 11 percent less than last year. Harvest of the Bartlett crop started in mid-August in Oregon and Washington; smaller crops were more than offset by increased output from California, where harvest should be completed a week earlier than normal. Production, other than Bartletts, in this region was estimated at 232,500 tons, down 14 percent from last year. Reduced crops are expected for both Oregon and Washington, which are the principal suppliers of pears for the winter and spring fresh markets. In contrast, output from the East will be generally larger than in 1983. Michigan also expects to harvest a sharply bigger crop.

Prices Up

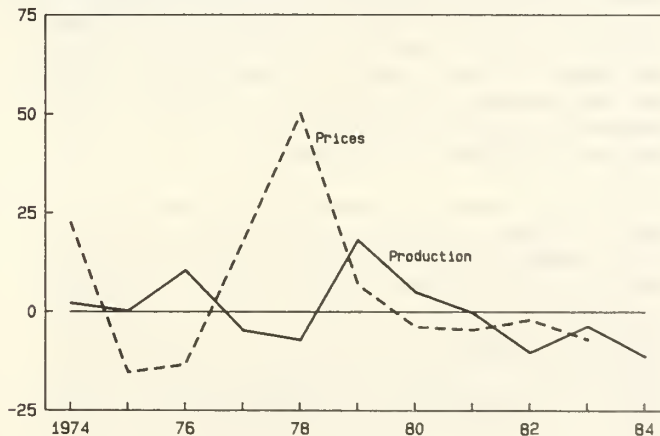
Because of the larger California crop, shipments of fresh Bartletts are running well ahead of last year's pace. F.o.b. prices at shipping points have been generally above a year earlier. In mid-September, f.o.b. prices were \$12.70 a standard box in Mendocino County, California, compared with \$11.75 a year ago. Even with a larger California crop, prices are expected to be relatively firm. Packer demand will rise with the depleted carryover stocks of canned pears. In addition, the sharply smaller Bartlett crops from Oregon and Washington will boost prices late in the season. The field price has settled in the Northwest at a cash price of \$187.50 per ton for No. 1 grade Bartlett. This compares with a cash price of \$122.50 and a deferred price of \$130.00 last year.

With the expected smaller crop of winter pears in the Northwest, grower prices are expected to rise above last year's low levels during the fall and winter.

Despite higher prices, demand for canned pears was relatively good during 1983/84. The sharply reduced supplies resulted in carryover stocks only one-half of the previous

U.S. Pears: Changes in Production and Prices

% change from previous year



Season average prices. Utilized production.
1984 indicated production.

season's quantity. With a smaller pack in prospect, the total supply will be small during the upcoming season. Prices have been strong and are expected to remain so because of the smaller supplies and the higher contract price of canning pears.

Exports Down Moderately

During July 1983-June 1984, U.S. exports of fresh pears fell 4 percent to 34,334 metric tons. The decrease was mainly attributable to reduced shipments to Latin America, Bermuda, and the Caribbean, while good gains were recorded in several other areas. Canada, the United States largest customer, increased its purchases by 14 percent. A 13-percent increase in shipments to Europe was mainly attributable to sharply larger purchases from the Netherlands, the United Kingdom, and West Germany. Exports to the Far East and Mideast also showed strength. However, prospects for U.S. exports of fresh pears during 1984/85 do not look very bright because of the reduced supplies and higher prices in prospect.

Plums and Prunes

Plum Crop Sets Record

The California plum crop was forecast at a record 210,000 tons, 33 percent above 1983. If realized, the crop would be 6 percent more than the 1981 record high. The increase is generally the result of an expansion in bearing acreage and higher yields. Because of a record crop, shipments were running significantly ahead of last year's pace. Larger supplies have caused prices to fall sharply below a year earlier. In mid-September, the shipping point prices for Casselman plums were reported at \$8.00 a 28-pound carton (size 4 X 4) in the central and southern San Joaquin valley, compared with \$10.00 a year ago. The season-average price is expected to be well below last year's \$437 a ton.

The prune and plum crop in Idaho, Michigan, Oregon, and Washington is expected to total 53,400 tons, 14 percent less than 1983. Prospects are down in Michigan by 8 percent and in Oregon by 32 percent. Idaho expects to harvest 6,400 tons, down slightly from last year, with good quality. Washington's forecast of 16,000 tons is up 9 percent from last year. Trees came through the winter in average condition, but with some damage from last December's cold temperatures. The crop season is about 10 to 14 days behind normal in Washington. Opening f.o.b. prices for fresh prunes in Yakima Valley, Washington, were moderately higher than a year earlier. In late August, f.o.b. prices were quoted at \$6.00 a 30-lb. carton, compared with \$5.00 a year earlier.

The 1984 production of California dried prunes is forecast at 140,000 tons, 3 percent below last year. The fruit size is generally good. Even with a smaller crop, the total supply for 1984/85 should be adequate for market demand. According to the California Prune Marketing Committee, shipments of dried prunes during 1983/84 totaled 150,526 tons, up slightly from 1982/83 as larger exports more than offset reduced domestic shipments. Exports showed an increase of 5.7 percent, accounting for 38 percent of the total shipments. Purchases from Europe increased 10 percent, accounting for 70 percent of the total dried prune exports. The smaller French crop

has boosted U.S. prune exports to Europe, particularly for France, Germany, and Finland. In contrast, Japan, the United States leading customer, reduced its imports 4 percent.

Rising demand has pushed wholesale prices of dried prunes slightly higher than a year earlier. The August BLS producer price index, at 258.4 (1967 =100), was up slightly. With the adequate supply for market demand, prices are not likely to strengthen appreciably during the upcoming season. The California Prune Marketing Committee has recommended that 100 percent of the 1984 prune crop be saleable.

BERRIES

Cranberries

Record Crop Forecast

The forecast of the 1984 U.S. cranberry crop is a record high 3.14 million barrels (142,000 metric tons), up 4 percent from the previous record set in 1983 and 7 percent more than the 1982 crop. Crop conditions in early August were such that all States, except Washington, expect production increased from 1983.

Massachusetts, the leading State, expects to harvest 1.48 million barrels, 1 percent above a year earlier and 15 percent above 1982. Production in Wisconsin is forecast at 1.2 million barrels, up 6 percent from 1983. Output in New Jersey is expected to be up 12 percent from last year and in Oregon, 16 percent. The adverse weather caused production of the Washington crop to fall 12 percent from 1983.

Most cranberries are used for processing; in 1983, approximately 87 percent of the cranberry crop was processed, including the entire output from New Jersey and Oregon (with the exception of small quantities that processors paid for but were lost because of dehydration and berry breakdown after delivery). Because of rising demand, grower prices averaged \$51 a barrel at the first delivery point, screened basis of utilized production, up 9 percent from 1982. Prices for the 1984 crop have not been established yet. With continued rising demand expected, prices are not likely to weaken appreciably even with a record crop.

Strawberries

The 1984 strawberry production in the major States is estimated at 950 million pounds, 12 percent above last year, reflecting increased acreage and yield. California, the largest producing State (with 88 percent of the spring crop), expects a 21-percent increase in production over last year's record. U.S. imports of fresh strawberries also show a sharp increase with a total of 2,864 metric tons from October 1983 to July 1984, up 24 percent from a year earlier. As a result, the larger U.S. crop and the much larger imports expected from Mexico will cause supplies of fresh strawberries to increase from last year.

Because of larger stocks of frozen strawberries at the beginning of the season and sharply lower prices for

Table 9.—Strawberry deliveries for freezing, 1983-84

State	1983	1984
<i>Million pounds</i>		
California ¹	162.0	144.3
Oregon ²	70.7	49.9
Washington ²	14.6	18.4
Total 3 States	247.3	212.6

¹Through August 25. ²For the season.

SOURCES: California and Washington Federal-State Market News Service.

strawberries for freezing, more strawberries have been shipped for fresh sales. Consequently, f.o.b. prices for fresh strawberries have been well below last year. However, fresh strawberry prices have strengthened because fresh market shipments are virtually finished for the season for all States except California. In mid-September, f.o.b. price for fresh strawberries in the Central California area were quoted at \$9.50 a 12-pint tray (medium to large sizes), compared with \$4.75 a year earlier.

Deliveries of strawberries to freezers in California have declined seasonally; by early September, shipments to freezers were well below a year earlier. Grower prices for processing strawberries in California recently strengthened, ranging from 19 to 24 cents a pound (stemmed and delivered to the processing plant), compared with 34 cents a year earlier. Processing is through for the season in the Pacific Northwest with the total pack up in Washington and down in Oregon. Prices received by growers were generally lower than a year earlier. Thus, the overall pack of frozen strawberries in the West Coast will be significantly smaller this year than 1983. On the other hand, imports of frozen strawberries from Mexico for the season through September 2 totaled 50.3 million pounds, compared with 40.3 million a year earlier. Therefore, even with a smaller pack, the larger carryin stocks and imports still resulted in increased frozen strawberry stocks at the beginning of August, 7 percent over last year. Consequently, heavy supplies and lower prices for fruit will weaken prices of frozen strawberries.

CITRUS

The final forecast of the 1983/84 citrus crop of 10.8 million tons, down 25 percent from 1982/83, reflected reduced output in all producing States; the sharply reduced output of both oranges and grapefruit was caused by the December freeze. Thus, combined with the significantly smaller California orange crop, on-tree returns for U.S. oranges have averaged sharply above last year. Likewise, reduced supplies and good demand have also strengthened grower prices for grapefruit and lemons. Prospects for the 1984/85 citrus crop will probably be small because of the December freeze that caused extreme damage to the citrus trees in Florida and Texas.

The recent infestation of citrus canker in Florida has caused the U.S. Department of Agriculture to put the entire State of Florida under an emergency quarantine to stop interstate movement of Florida citrus. This infestation will have an as yet undetermined effect on supplies of citrus shipped from Florida. The effect on supplies, if any, will depend on the duration of the quarantine and

the extent of damage to citrus fruits and trees. Normally, only a limited quantity of fresh oranges and grapefruits are shipped from Florida at this time of year because the season will not get underway until October. Florida's fresh lime shipping season has already peaked, while fresh lemon shipments are also generally small at this time of year.

Oranges

Remaining Supplies of Valencias Smaller

The final 1983/84 California-Arizona Valencias forecast is 16.3 million boxes, 58 percent below last season. The smaller crop has caused remaining supplies as of September 6 to be almost 73 percent less than a year earlier according to the California Valencia Administrative Committee. Sales for these oranges were sharply reduced for processing use and export markets, while shipments for domestic fresh sales were also down substantially. Consequently, domestic fresh sales accounted for 50 percent of the total shipments. Although export shipments were down sharply, the share of the market was up from last season. Processing use was down sharply, in relative terms. With greatly reduced supplies, the season is likely to finish much sooner than last year.

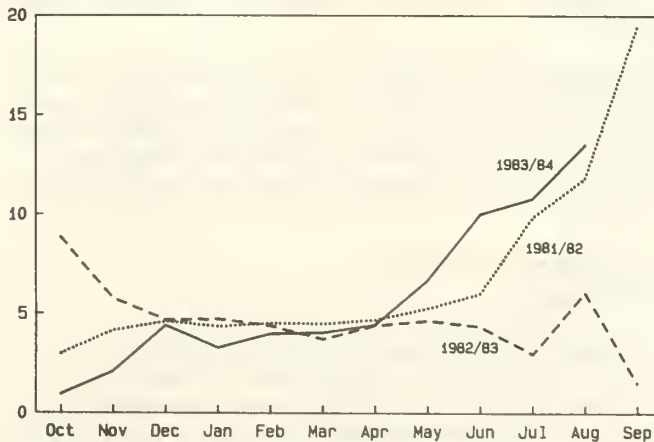
Sharply Higher Prices

The Florida freeze and smaller California orange production have contributed to sharply higher orange prices for fruit destined for the fresh market. U.S. on-tree returns for fresh market reached the top level of \$16.58 a box in August, more than doubled from a year ago. The smaller remaining supplies, combined with seasonally declining supplies of fresh summer fruit, will keep orange prices strong until the fall when larger supplies become available.

Fresh orange retail prices have also strengthened this summer. The BLS retail price for fresh Valencia oranges in July averaged 61.8 cents per pound, compared with 41.8 cents a year ago. In view of smaller available supplies, retail prices are likely to remain strong throughout the 1983/84 season.

All Oranges: U.S. Equivalent On-Tree Returns Received by Growers

Dollars per box



Exports Substantially Reduced

Reflecting sharply reduced shipments to Europe, U.S. exports of fresh oranges during the 9 months ending July 1984 totaled 323,434 metric tons, down 15 percent from a year earlier. The high prices coupled with the strong U.S. dollar have severely hurt U.S. oranges in European markets. In particular, purchases from the Netherlands, France, Belgium-Luxemburg, and Sweden fell dramatically. Overall, exports to Europe were down 97 percent from a year earlier. Because of the continued economic recovery, Canada, the leading customer, purchased only 11 percent less than a year earlier. However, exports to Hong Kong, the United States second largest buyer, were down only 8 percent. Shipments of fresh oranges to Japan showed only a slight decrease through July.

Good demand and sharply reduced supplies have resulted in strong imports of fresh oranges, totaling 16,254 metric tons, from October 1983 to July 1984, up 170 percent from a year earlier. Purchases from Mexico, the leading supplier, rose 80 percent and accounted for 44 percent of the total U.S. imports

FCOJ Pack Well Below Last Season

The smaller Florida orange crop and a lower juice yield caused a sharply reduced FCOJ pack. The 1983/84 pack, at 121.2 million gallons, was down 29 percent from last season. Thus, even with heavy imports, the reduced carryin stocks combined with the smaller pack will still result in a total supply available for marketing that is significantly less than last season. According to the Florida Citrus Processor Association, imports into Florida, mostly from Brazil, through September 1 this season, totaled 58.9 million gallons, up 91 percent from last season. Imports are likely to continue at the current expanded rate through the season.

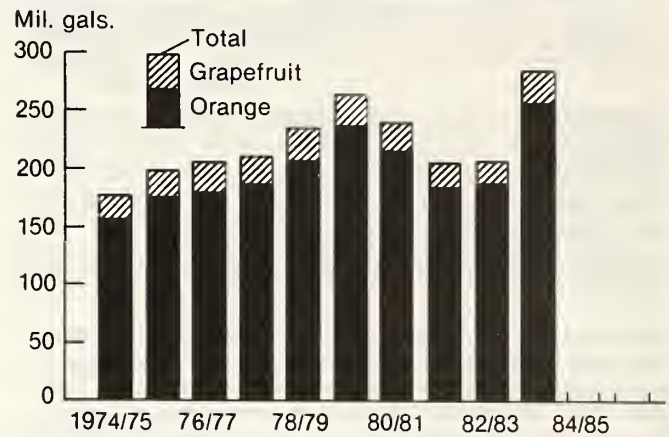
Despite higher prices, movement of FCOJ is running near last season's pace. Through September 1, total movement amounted to 170 million gallons, down slightly from a year earlier. The prices have been steady, at \$5.04 per dozen 6-ounce cans (unadvertised brand, f.o.b. Florida canneries), compared with \$3.95 last season. Mainly reflecting the sharply smaller pack, stocks as of September 1 were 66.8 million gallons, down from 90.3 million a year earlier. Even with the smaller stocks, f.o.b. prices are likely to remain steady through the balance of the season. If movement continues at this rate, the carryover stocks will be significantly lower than last season.

Tight supplies and higher f.o.b. prices have also caused higher retail prices of FCOJ. In July, the BLS reported that retail prices of FCOJ averaged \$1.66 a 16-ounce container, up 24 percent from a year earlier. Prices may remain steady if movement does not increase significantly.

Supplies of Chilled Juice Up Sharply

In response to strong demand, Florida's 1983/84 output of chilled orange juice to September 1 totaled 258 million gallons (excluding single-strength reprocessed), up 49 percent from last season. The increase reflects entirely the sharply increased quantities of frozen concentrates

Florida Packs of Chilled Citrus Juice



Season beginning October. Includes pack from fresh and frozen concentrates. Pack for 1983/84 through September 1.

processed. Of the total chilled juice pack, 165 million gallons had been processed from frozen concentrates, up 135 percent from a year earlier. The remainder, 93 million gallons, came from fresh fruit and was down substantially from last season.

The good economy has caused rising demand for chilled orange juice. Through September 1, domestic movement totaled 244 million gallons, up sharply from a year earlier. Shipments abroad, however, fell considerably during the same period. Because of the larger pack, stocks as of September 1 were sharply larger than last year. Nevertheless, with strong demand, prices are expected to remain firm.

Smaller Supplies of Canned Juice

Smaller carryin stocks and a reduced pack have resulted in substantially smaller supplies of canned orange juice. The total pack so far this season is running 7 percent behind last season. Because of higher prices, movement has been slack. Florida canned orange juice is currently quoted at \$12.50 a dozen 46-ounce cans (single-strength, sweetened and unsweetened, f.o.b. Florida canneries), compared with \$9.75 a year ago. Recently, a California packer raised the list price of canned orange juice from \$12.00 to \$12.50 a dozen 46-ounce cans. This brought it to the same level Florida packers are posting. With the slack movement, prices are not likely to rise appreciably during the balance of the season. However, even with the reduced movement, the smaller pack will result in smaller carryover stocks this season than last.

Grapefruit

Adequate Supplies Remain

The final forecast for the 1983/84 grapefruit crop is 53.3 million boxes, 12 percent below last season, reflecting primarily the freeze-reduced Texas crop. Remaining supplies are from California's southern coast areas and are usually marketed fresh during the summer. With ample supplies of summer fruit, demand for fresh grapefruit is not expected to be strong. Thus, supplies are expected to be adequate to meet market demand.

The December freeze in Florida and Texas has pushed grapefruit prices for fresh market sharply higher than a year earlier. U.S. on-tree returns for fresh grapefruit have averaged above a year earlier for each month of 1984. However, in August, on-tree returns for California fresh grapefruit averaged \$4.82 a box, slightly below last year. With seasonally reduced supplies, grapefruit prices are expected to remain relatively high during the balance of the season. The reduced supplies have also pushed retail fresh grapefruit prices well above a year earlier. However, the price of fresh grapefruit in July weakened primarily because of larger supplies of summer fruit. In view of seasonally reduced supplies of both summer fruit and grapefruit, retail prices are expected to remain firm until the beginning of next season.

Exports Sluggish

The high prices and strong U.S. dollar continued to weaken exports of fresh grapefruit. During the 11 months ending July 1984, U.S. exports totaled 252,907 metric tons, 15 percent below a year earlier. The reduced purchases were recorded for most countries. Japan, the United States leading customer, bought 15 percent less than a year earlier. Canada, the second largest market, reduced its purchases by 11 percent from last year. Shipments to Europe dropped sharply, reflecting primarily the weak markets in France, West Germany, and the United Kingdom. These three countries accounted for almost 67 percent of the total European purchases. Prospects for the export markets are not very encouraging.

Grapefruit Juice Pack Mixed

Because of continued rising demand and sharply lower carryover stocks, Florida packers have processed more frozen concentrated grapefruit juice (FCGJ) this season than in 1982/83. So far, approximately 19.3 million gallons (excluding reprocessed) have been packed, up 33 percent from a year earlier. Nevertheless, the total supply is not expected to exceed last season. F.o.b. prices have been steady at \$3.25 a dozen 6-ounce cans (unadvertised brand, f.o.b. Florida), compared with \$2.47 last year. Through September 1, total movement amounted to 15.7

million gallons, up 2 percent from a year earlier, but the smaller supply still resulted in stocks as of September 1 substantially below last year. Prices are likely to remain steady through the season.

In response to rising demand, Florida packers have also processed more chilled grapefruit juice, amounting to 25 million gallons (excluding single-strength reprocessed), up 35 percent from a year earlier, primarily reflecting a larger pack from frozen concentrates. Despite higher prices, a total of 25 million gallons had been shipped, a 28-percent rise from last season. However, the larger pack more than offsets larger movement and smaller carry-in stocks, leaving the stocks, as of September 1, significantly larger than a year earlier. Consequently, prices are not likely to rise, at least until the new season gets underway this fall.

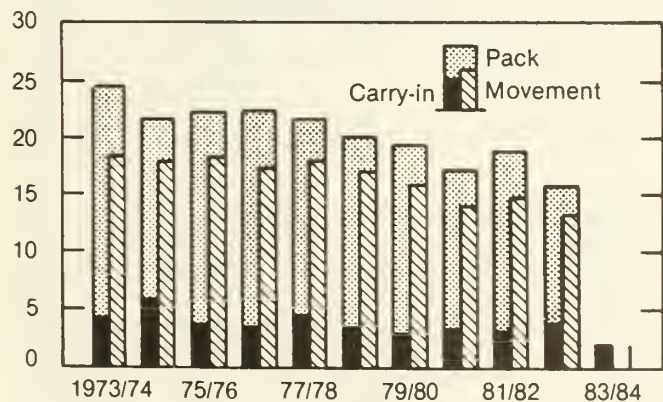
In contrast, a total of 9.0 million cases (24-2's) of canned single-strength grapefruit juices had been packed through September 1, down 18 percent from a year ago. Higher prices and the increased demand for FCGJ and chilled grapefruit juice have weakened movement of canned grapefruit juice. F.o.b. prices have been steady at \$9 a dozen 46-ounce cans (sweetened and unsweetened), up from \$6.15 a year earlier. Nevertheless, significantly smaller carry-in stocks and the reduced pack more than offset slower movement, leaving stocks as of September 1 well below a year ago. F.o.b. prices are likely to remain at the current level through the balance of the season.

Lemons

The final forecast of the 1983/84 lemon crop is 21.3 million boxes, down 15 percent from last season. The smaller crop caused a substantially reduced quantity for processing use. Consequently, processing use accounted for 46 percent of the total crop, compared with 54 percent a year earlier. Export demand was generally good, up 3 percent from last season. The increased exports counterbalanced the decreased domestic shipments, leaving total fresh shipments near last season's. The increased exports were mainly attributed to larger purchases from Canada, Hong Kong, and Japan. These three markets accounted for almost 90 percent of the lemons exported.

Florida Canned Grapefruit Juice: Pack, Movement and Stocks

Mil. cases*



*24/2's. Season beginning October.

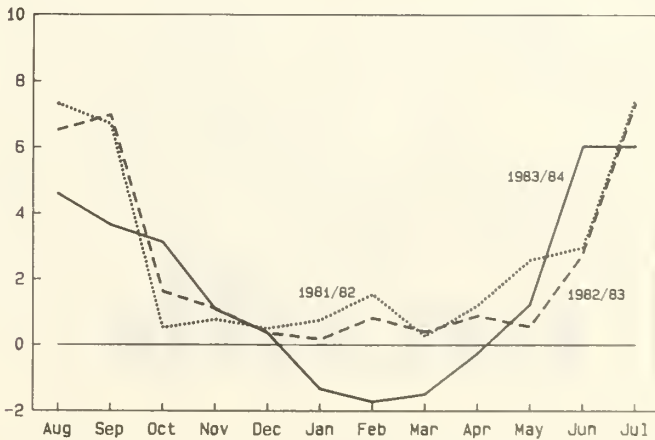
Source: Florida Citrus Processors Association.

USDA

Neg. ERS 131-84(8)

All Lemons: U.S. Equivalent On-Tree Returns Received by Growers

Dollars per box



In response to the smaller crop, fresh lemon f.o.b. prices for the 1983/84 season averaged \$9.34 per carton, up from \$8.86 last season. However, in August, on-tree returns were moderately below the extremely high prices of last year. Prices are expected to remain relatively high until supplies increase seasonally this fall. The first forecast for the Arizona 1984/85 lemon crop is 5.9 million boxes, 48 percent above last season. The California Desert Area lemon forecast is 4 million boxes, compared with 2.3 million utilized crop last season. A forecast for the 1984/85 total California lemon crop will be issued on October 11.

Limes

Crop Moderately Larger

Florida's 1984/85 lime crop is forecast at 1.6 million boxes, up 6.7 percent from 1983/84. Lime trees are in excellent condition and showed a good spring bloom. They were not affected by the December freeze that hit the northern portion of the citrus belt.

Despite a larger crop, f.o.b. prices for fresh limes were moderately above a year earlier. However, f.o.b. prices have weakened to levels sharply below a year ago. With good demand, prices may still average above 1983/84.

TREE NUTS

Almonds

Crop Sets Record

The July 1 forecast for the 1984 California almond crop is a record 520 million pounds, shelled basis. This is up 16 percent from the June estimate and up 117 percent from the 1983 weather-reduced crop. The nonpareil variety is forecast at 320 million pounds, shelled basis. The record crop is attributed to many factors. First, warm spring weather provided excellent pollination conditions, which resulted in a tremendous set. The 1984 average set per tree was a record 9,216 nuts. Secondly,

despite the heavy set, the kernel size is very close to the 10-year average. And finally, the 1984 bearing acreage is up nearly 13,800 over 1983.

Opening prices in late August were about 20 percent below those of the short 1983 crop. The Almond Board of California estimates that domestic and export shipment for the 1984/85 season would be record high.

Export prospects for 1984/85 may improve somewhat because almond prices are expected to fall. On the other hand, despite a large crop, Spain currently projects that almond exports could decline in 1984/85.

The Almond Board of California recommended to the U.S. Secretary of Agriculture that 25 percent of the 1984 almond crop be placed in a reserve status.

In 1983, the U.S. average grower price was \$1.16 a pound, up 23 percent from 1982. With the record crop, the price is expected to be below 1983.

Walnuts

Moderately Larger Production Forecast

The September 1 forecast for the 1984 California walnut crop was 225,000 tons, 13 percent more than the 1983 crop, but 4 percent below the 1982 record. Crop conditions continue very good and yield prospects are above last year.

According to the Walnut Marketing Board, shipments for the 1983/84 marketing year (in-shell equivalent) totaled approximately 208,500 tons, compared with 200,000 tons the previous season. Sales of in-shell walnuts totaled 128 million pounds, down 4 percent from 1982/83 as smaller exports more than offset larger domestic shipments. Exports, accounting for 56 percent of total in-shell sales, decreased 11 percent, while domestic sales were up 6 percent. In contrast, shipments of shelled walnuts were up for both exports and domestic sales. Sales abroad, although a small quantity, were up 18 percent from last season. Domestic sales, accounting for 92 percent of the total shelled sales, increased 13 percent.

U.S. Almond Supply and Utilization

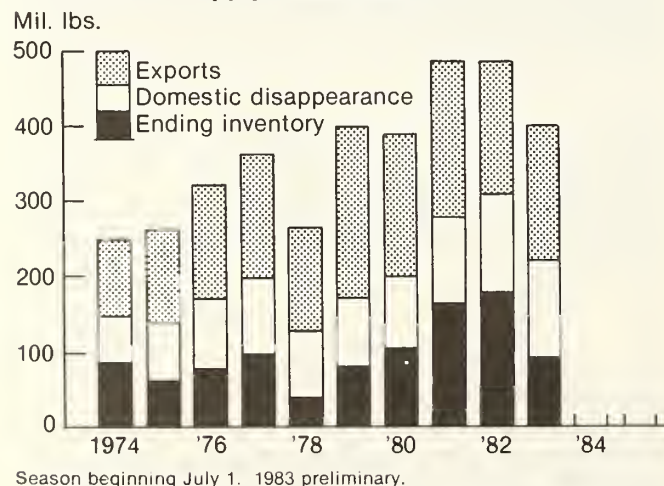


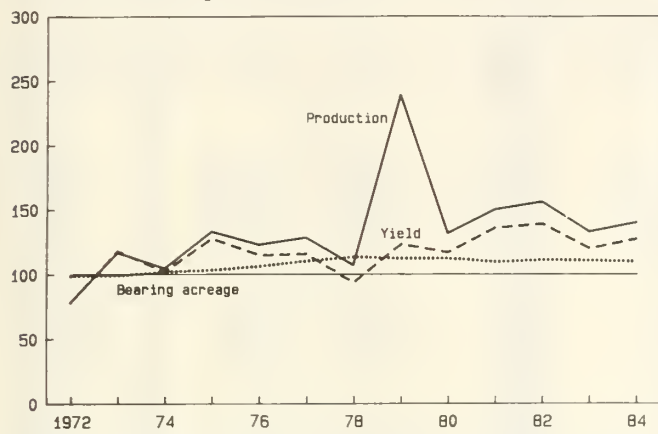
Table 10.—Tree nuts: Production, 1982, 1983, and indicated 1984

Crop and State	1982	1983	1984
<i>1,000 lbs</i>			
Almonds: (Shelled)			
California	347,000	240,000	520,000
<i>Tons</i>			
Walnuts, English:			
(In-shell)			
California	234,000	199,000	225,000
Pecans:			
U.S.	107,550	135,000	125,450
Filberts:			
U.S.	18,800	8,200	14,000

SOURCE: Crop Production, SRS, USDA.

California Walnuts: Acreage, Production, and Yield Per Acre

% of 1972-74 average



There also was a shift in exports to various nations. West Germany replaced Spain as the leading buyer of U.S. walnuts, taking 33 percent of U.S. shipments. Larger shipments are reported for almost all countries in the Pacific area. Europe remains the major foreign market for U.S. walnuts, but Canada showed good gains, taking a sizable amount in 1983/84.

The sharply larger carryin stocks at the beginning of the 1983/84 season exerted downward pressure on walnut prices received by growers, which fell from \$1,020 in 1982 to \$631 a ton in 1983. Prices for the new crop have not yet been established. However, even with a larger crop in prospect, walnut prices are not expected to decline appreciably from last year's low.

Pecans

Moderately Smaller Crop Expected

The season's first forecast for the 1984 U.S. pecan crop is 251 million pounds, in-shell basis, 7 percent less than last year, but 17 percent above 1982. About 74 percent of the crop is expected to be from improved varieties compared with 62 percent in 1983 and 78 percent in 1982. Georgia, the leading producer, expects to harvest 130 million pounds, 30 percent above last year's crop. The pecan crop in Oklahoma is forecast at 20 million pounds, compared with 8 million in 1983. The Alabama crop forecast is 20 million pounds, 17 percent less than last year. Smaller crops were also indicated for New Mexico and Louisiana.

Cold-storage holdings of pecans were substantially larger than a year earlier. Even with a smaller crop, total supplies of pecans should be adequate for market demand. In 1983, the U.S. average grower price was 58.7 cents a pound, compared with 67.4 cents in 1982. With ample supplies of other tree nuts, pecan prices are not expected to rise appreciably even with a smaller crop.

Table 11.—Tree nuts in cold storage, June 30, 1982-84

Kinds	1982	1983	1984
<i>Million pounds</i>			
Almonds:			
In-shell	0.9	4.6	1.4
Nutmeats	86.0	87.3	41.1
Walnuts:			
In-shell	17.6	48.0	39.9
Nutmeats	26.5	19.4	19.5
Filberts:			
In-shell	.6	.3	.4
Nutmeats	1.7	3.8	1.4
Pecans:			
In-shell	103.4	47.6	75.8
Nutmeats	27.9	34.9	35.6
Other tree nuts:			
In-shell	4.6	4.6	1.4
Nutmeats	9.9	11.0	10.1
Total:			
In-shell	127.1	105.1	118.9
Nutmeats	152.0	156.4	107.7

SOURCE: Cold Storage, SRS, USDA.

Filberts

Sharply Larger Crop Forecast

The first forecast for the 1984 filbert crop in Oregon and Washington is 14,000 tons, in-shell basis, up 71 percent from last year's small crop, but 26 percent below 1982's record high production. Larger crops are reported for both Washington, up 71 percent, and Oregon, up 50 percent. There are larger numbers of single nut clusters and few multiples. Harvest should start about October 1.

U.S. imports of filberts, mostly from Turkey, during the first 10 months of 1983/84 (October-July) totaled 3,429 metric tons (shelled equivalent), up 42 percent from a year earlier. Filbert production in Turkey this year is currently estimated to be 29 percent below 1983. With the sharply larger crop and a reduced supply from Turkey, U.S. imports of filberts could be down from last season. In 1983, the U.S. average price received by growers was \$558 a ton, down 16 percent from 1982. The larger filbert crop will cause prices to be below the 1983 levels.

PER CAPITA TREE NUT CONSUMPTION

Per capita consumption of tree nuts in the United States increased to 2.29 pounds during 1983/84 from 2.08 the year before. The increase was primarily attributed to increased consumption of walnuts, reflecting lower prices. Per capita consumption for other tree nuts in 1983 showed slight changes from 1982. Estimated by the California Pistachio Commission, per capita consumption for pistachio nuts, now separated from other tree nut consumption, is carried back to 1977. Detailed data regarding per capita tree nut consumption are presented in the following table.

Table 12.—Tree nuts (shelled basis): Per capita consumption, 1960-83, crop year¹

Crop year ²	Almonds	Filberts	Pecans	Walnuts	Macadamias	Pistachios ³	Other ⁴	Total
<i>Pounds</i>								
1960	0.30	0.07	0.36	0.32	0.004	—	0.52	1.57
1961	.28	.07	.44	.30	.006	—	.53	1.63
1962	.27	.05	.27	.32	.008	—	.56	1.48
1963	.27	.05	.45	.32	.010	—	.47	1.57
1964	.30	.05	.43	.41	.012	—	.56	1.76
1965	.31	.06	.52	.33	.013	—	.56	1.79
1966	.33	.07	.41	.37	.013	—	.54	1.73
1967	.30	.07	.40	.37	.012	—	.59	1.74
1968	.33	.07	.39	.33	.016	—	.68	1.82
1969	.30	.05	.42	.34	.015	—	.58	1.71
1970	.34	.06	.36	.38	.020	—	.60	1.76
1971	.37	.07	.38	.42	.021	—	.62	1.88
1972	.36	.07	.38	.39	.019	—	.72	1.94
1973	.26	.10	.36	.40	.017	—	.57	1.71
1974	.26	.05	.34	.43	.023	—	.45	1.55
1975	.35	.08	.33	.52	.025	—	.61	1.91
1976	.42	.08	.29	.52	.026	—	.56	1.89
1977	.45	.07	.31	.51	.027	0.04	.29	1.70
1978	.40	.08	.33	.39	.028	.04	.42	1.69
1979	.37	.04	.40	.48	.036	.04	.38	1.75
1980	.42	.05	.37	.50	.044	.04	.32	1.75
1981	.51	.05	.38	.49	.044	.03	.33	1.82
1982	.59	.07	.41	.46	.047	.04	.46	2.08
1983 ⁵	.58	.06	.40	.63	.047	.05	.52	2.29

¹Civilian consumption only. ²Beginning August of year indicated for filberts and walnuts, January for Macadamias, September for pistachios and July for all others. ³Estimates begin in 1977. ⁴Includes the following nuts: Brazil, pignolia, pistachios (excluded beginning 1977), chestnuts, cashews, and miscellaneous. ⁵Preliminary.

SOURCE: Economic Research Service, USDA.

**Table 13.—Noncitrus fruit and berries:
Production and utilization, United States, 1967-83 crops**

Year	Utilized production	Utilization of sales			
		Fresh		Processed ¹	
		Quantity	Percentage	Quantity	Percentage
	<i>1,000 tons</i>	<i>1,000 tons</i>	<i>Percent</i>	<i>1,000 tons</i>	<i>Percent</i>
1967	8,863	3,220	36.3	5,643	63.7
1968	10,187	3,583	35.2	6,604	64.8
1969	11,433	3,877	33.9	7,556	66.1
1970	10,138	3,536	34.9	6,602	65.1
1971	10,795	3,591	33.3	7,204	66.7
1972	8,667	3,275	37.8	5,392	62.2
1973	11,205	3,561	31.8	7,644	68.2
1974	12,207	4,455	36.5	7,752	63.5
1975	12,660	4,922	38.9	7,738	61.1
1976	12,136	4,748	39.1	7,388	60.9
1977	12,605	4,746	37.7	7,859	62.3
1978	12,790	4,406	34.4	8,384	65.6
1979 ²	14,021	4,589	32.7	9,432	67.3
1980	15,428	5,232	33.9	10,196	66.1
1981 ³	13,263	4,959	37.4	8,304	62.6
1982	14,652	4,980	34.0	9,672	66.0
1983 ⁴	14,076	5,073	36.0	9,001	64.0

¹Processed includes cull and cannery diversion for clingstone peaches. ²Kiwifruit estimates excluded for 1979; estimated began in 1980. ³Bush-berries discontinued in 1981. ⁴Preliminary.

SOURCES: Noncitrus Fruits and Nuts and Vegetable Reports, SRS, USDA.

**Table 14.—Production and utilization of apples, avocados, and cranberries,
United States, 1980-83 crops**

Commodity and year	Production		Utilization						
	Total	Uti- lized ¹	Processed (fresh equivalent)						Total processed ¹
			Fresh	Canned	Juice & cider	Frozen	Dried	Other ²	
Thousand tons									
Apples:									
1980	4,414.2	4,405.2	2,471.1	601.2	1,069.5	83.8	97.4	82.4	1,934.2
1981	3,876.8	3,853.0	2,226.9	501.2	900.0	86.4	95.0	43.6	1,626.1
1982	4,057.5	4,050.6	2,263.3	624.3	904.6	95.4	105.0	58.2	1,787.3
1983	4,157.3	4,146.7	2,305.5	604.9	975.7	84.8	129.2	46.7	1,841.2
Avocados ³ :									
1980/81	268.8	268.8	268.8	—	—	—	—	—	—
1981/82	182.8	182.8	182.8	—	—	—	—	—	—
1982/83	236.7	236.7	236.7	—	—	—	—	—	—
1983/84	245.0	245.0	245.0	—	—	—	—	—	—
Cranberries ⁴ :									
1980	134.9	134.9	16.3	—	—	—	—	—	113.0
1981	129.7	129.7	24.0	—	—	—	—	—	98.9
1982	146.8	146.8	23.5	—	—	—	—	—	115.3
1983	151.3	151.3	16.0	—	—	—	—	—	131.4

¹Some totals may not add due to rounding. ²Apples: Includes vinegar, wine, jam, fresh slices for pie filling, etc. ³Includes some processing. ⁴Utilized cranberries include shrinkage.

SOURCE: Noncitrus Fruits and Nuts Mid-Year Supplement, SRS, USDA.

Prospects for the 1985 farm bill will come under close scrutiny at **Outlook '85**, USDA's 61st annual agricultural outlook conference, which will be held in Washington, D.C., December 3-5, 1984. As is its tradition, the conference will lead off with the outlook for the economy, agriculture and trade, and international policy—major components of today's agricultural equation.

OUTLOOK '85



Shorter and tighter than in recent years, the conference will provide policymakers with a complete overview of the agricultural situation in 3 days. Secretary of Agriculture John Block is scheduled to open the proceedings with an address at 10 a.m. Monday, December 3. Two special panels on the 1985 farm bill will follow, one focusing on the environment for the new legislation and the second including viewpoints from members of Congress, the Administration, and the farm and private sectors. Succeeding sessions will cover the major farm commodities, while sessions on family economics and nutrition are scheduled over the 3 days.

The **Fruit 1985 Outlook Session** will be held on Tuesday, December 4, at 2:15 p.m.

This year for the first time, listeners outside the Washington area will be able to call in questions to certain follow-up sessions for major commodities. Callers will use a regular long-distance business line at regular long-distance rates.

As last year, a 900-line service will allow listeners to hear all sessions. The service costs 50 cents for the first minute and 35 cents for each additional minute. Thus, you can hear an hour-long session for less than \$22, plus tax.

For a copy of the preliminary **Outlook '85** program, which contains time and location for each session, please write: Outlook '85, USDA/WAOB, Room 5143-S., Washington, D.C. 20250.

Table 15.—Apples, commercial crop¹: Total production and season-average prices received by growers, 1982, 1983, and indicated 1984 production

State and area	Production ²			Price per pound	
	1982	1983	1984	1982	1983
	<i>Million pounds</i>			<i>Cents</i>	
Eastern States:					
Maine	89.0	84.0	80.0	14.5	15.5
New Hampshire	56.0	57.0	54.0	15.5	16.7
Vermont	50.0	46.0	44.0	14.7	14.4
Massachusetts	100.0	97.0	100.0	17.3	16.9
Rhode Island	6.0	5.0	5.5	16.0	18.6
Connecticut	55.0	44.0	45.0	16.1	15.7
New York	1,130.0	1,100.0	1,060.0	8.9	9.8
New Jersey	140.0	100.0	110.0	10.3	10.5
Pennsylvania	525.0	500.0	500.0	9.3	8.5
Delaware	14.5	13.5	13.5	9.8	10.0
Maryland	80.0	70.0	75.0	13.7	10.8
Virginia	500.0	455.0	500.0	9.7	7.7
West Virginia	230.0	210.0	240.0	9.2	7.4
North Carolina	170.0	415.0	375.0	8.1	6.3
South Carolina	6.0	18.0	40.0	11.4	8.1
Georgia	15.0	20.0	45.0	10.8	8.6
Total	3,166.5	3,234.5	3,287.0		
Central States:					
Ohio	150.0	100.0	135.0	13.5	15.9
Indiana	77.0	56.0	66.0	13.8	15.2
Illinois	88.0	90.0	91.0	13.3	13.3
Michigan	980.0	750.0	800.0	6.9	7.7
Wisconsin	56.0	55.0	53.0	13.5	16.4
Minnesota	25.0	22.0	19.0	19.0	20.3
Iowa	11.5	12.0	6.0	14.5	15.8
Missouri	45.0	45.0	48.0	15.0	15.3
Kansas	12.5	13.5	9.0	13.5	11.6
Kentucky	12.0	14.0	14.0	15.4	13.9
Tennessee	4.5	8.5	9.0	17.7	14.5
Arkansas	10.0	22.0	24.0	15.1	10.4
Total	1,471.5	1,188.0	1,274.0		
Western States:					
Idaho	126.0	128.0	110.0	16.1	17.3
Colorado	40.0	85.0	65.0	10.3	9.1
New Mexico	12.0	6.0	7.5	12.4	14.4
Utah	54.0	58.0	45.0	12.9	10.0
Washington	2,615.0	3,000.0	2,900.0	9.7	11.6
Oregon	150.0	155.0	135.0	10.0	10.0
California	480.0	460.0	510.0	11.2	11.8
Total	3,477.0	3,892.0	3,772.5		
United States	8,115.0	8,314.5	8,333.5	10.0	10.6

¹In orchards of 100 or more bearing trees. ²Includes unharvested production and harvested not sold (million pounds): United States: 1982—13.8, 1983—21.1.

SOURCES: Production, Crop Production and Prices, Noncitrus Fruits and Nuts Mid-Year Supplement, SRS, USDA.

Table 16.—Apples, Yakima Valley, Washington¹: Monthly average prices per carton tray pack, extra fancy, f.o.b. shipping point, 1982/83-1983/84

Month	Red Delicious				Golden Delicious			
	Regular storage		C.A. storage ²		Regular storage		C.A. storage ²	
	1982/83	1983/84 ³	1982/83	1983/84 ³	1982/83	1983/84 ³	1982/83	1983/84 ³
<i>Dollars</i>								
August	—	12.00	10.07	14.13	—	—	12.00	14.13
September	12.40	12.13	—	—	11.00	11.13	—	—
October	10.95	10.56	—	—	10.83	10.34	—	—
November	10.75	10.43	—	—	11.00	10.21	—	—
December	9.23	10.48	—	—	10.45	10.38	—	—
January	8.21	10.75	—	—	10.10	9.81	—	—
February	7.83	—	10.25	12.25	8.17	—	11.50	12.25
March	9.75	—	9.80	12.30	11.50	—	11.36	11.70
April	10.00	—	9.88	12.38	11.00	—	10.70	11.88
May	—	—	10.63	12.50	—	—	10.53	12.75
June	—	—	10.98	12.30	—	—	10.50	14.25
July	—	—	10.98	12.00	—	—	10.83	—

¹ Apples sizes 88's-113's. ² C.A. = Control Atmosphere. ³ Preliminary January through July 1984.

SOURCE: Agricultural Marketing Service, USDA.

Table 17.—Grapes: Total production and season-average prices received by growers in principal States, 1982, 1983, and indicated 1984 production

State	Production ¹			Price per ton ²	
	1982	1983	1984	1982	1983
<i>Tons</i>			<i>Dollars</i>		
New York	157,000	191,000	195,000	234.00	226.00
Pennsylvania	47,000	62,500	60,000	225.00	170.00
Ohio	9,000	11,500	12,000	227.00	199.00
Michigan	58,500	60,000	50,000	201.00	194.00
Missouri	2,500	3,600	4,100	320.00	349.00
North Carolina	4,500	3,000	6,000	321.00	324.00
Georgia	2,800	2,500	2,900	473.00	534.00
South Carolina	2,400	1,500	2,500	289.00	303.00
Arkansas	10,500	10,000	10,000	238.00	252.00
Arizona	15,100	14,600	13,600	991.00	1,050.00
Washington	168,900	227,000	195,000	185.00	152.00
California:					
Wine	2,402,000	1,880,000	1,800,000	218.00	209.00
Table	612,000	497,000	430,000	344.00	354.00
Raisin ³	3,062,000	2,530,000	2,250,000	218.00	158.00
Dried ⁴	292,000	394,000	—	1,153.00	587.00
Not dried	1,112,000	619,000	—	214.00	237.00
All	6,076,000	4,907,000	4,480,000	231.00	199.00
United States	6,554,200	5,494,200	5,031,100	232.00	200.00

¹ Includes unharvested production and harvested not sold (tons): U.S. 1982—690,200, 1983—146,500. ² Price derived from unrounded data for California all varieties and raisin varieties. ³ Fresh equivalent of dried and not dried. ⁴ Dried basis, 1 ton of raisins is equivalent to 5.24 tons of fresh grapes for 1982 and 4.48 tons for 1983.

SOURCES: Production, Crop Production and Prices, Noncitrus Fruits and Nuts Mid-Year Supplement, SRS, USDA.

Table 18.—Peaches: Total production and season-average prices received by growers, 1982, 1983, and indicated 1984 production

State	Production ¹			Price per pound	
	1982	1983	1984	1982	1983
	<i>Million pounds</i>			<i>Cents</i>	
Southern States:					
North Carolina	2.0	12.0	45.0	13.4	26.2
South Carolina	210.0	95.0	440.0	23.2	20.1
Georgia	120.0	100.0	150.0	20.4	25.1
Alabama	15.0	14.0	22.0	23.8	19.6
Mississippi	4.0	4.0	6.0	26.3	24.4
Arkansas	32.0	30.0	35.0	17.2	19.2
Louisiana	5.0	6.0	7.0	32.0	37.0
Oklahoma	9.0	9.0	13.0	26.4	23.4
Texas	16.0	27.0	23.0	30.0	28.0
Total Southern States	413.0	297.0	741.0		
California:					
Clingstone ²	1,102.0	619.0	990.0	9.2	9.0
Freestone	415.0	435.0	440.0	10.6	11.3
Total California	1,517.0	1,054.0	1,430.0		
Other States:					
Massachusetts	1.5	1.7	1.5	45.0	46.0
Connecticut	2.3	2.5	2.3	45.0	46.0
New York	12.0	16.0	11.0	27.1	23.2
New Jersey	80.0	95.0	35.0	27.6	25.4
Pennsylvania	90.0	94.0	85.0	21.4	16.8
Ohio	.7	7.0	.2	32.0	28.0
Indiana	(3)	5.5	.5	(3)	31.4
Illinois	(3)	13.0	16.0	(3)	26.9
Michigan	50.0	35.0	45.0	20.9	21.5
Missouri	4.5	12.0	20.0	29.0	22.0
Kansas	1.8	5.0	2.5	21.9	29.2
Delaware	1.7	2.0	2.0	21.5	20.1
Maryland	17.0	22.0	19.0	22.6	19.5
Virginia	27.0	24.0	32.0	18.2	18.0
West Virginia	14.0	19.0	17.0	23.3	13.8
Kentucky	(3)	6.0	3.0	(3)	31.0
Tennessee	1.5	4.0	9.5	25.0	22.0
Idaho	7.0	11.0	7.5	23.2	17.9
Colorado	11.0	10.0	11.0	26.3	23.1
Utah	3.5	12.0	10.0	25.1	15.0
Washington	25.0	28.0	31.0	22.3	21.4
Oregon	13.0	14.0	14.0	29.0	23.0
Total Other States	363.5	438.7	375.0		
United States	2,293.5	1,789.7	2,546.0	14.4	14.8

¹Includes unharvested production and excess cullage (million pounds): United States, excluding California clingstone, 1982-24.7; 1983-37.5.

²California clingstone is over the scale tonnage and includes culls and cannery diversions (million pounds): 1982-159.0. ³No significant commercial production due to earlier frosts.

SOURCES: Crop Production and Noncitrus Fruit and Nuts Annual, SRS, USDA.

Table 19.—Pears: Total production and season-average prices received by growers by States and Pacific Coast, variety comparison, 1982, 1983, and indicated 1984 production

States	Production ¹			Price per ton ²	
	1982	1983	1984	1982	1983
	<i>Tons</i>			<i>Dollars</i>	
Connecticut	1,550	1,450	1,500	500.00	515.00
New York	19,000	19,000	20,000	201.00	271.00
Pennsylvania	4,600	2,700	4,100	310.00	285.00
Michigan	12,000	8,000	10,000	220.00	237.00
Colorado	2,700	5,500	4,700	243.00	168.00
Utah	2,800	3,500	3,700	257.00	296.00
Washington	264,800	278,800	203,000	196.00	176.00
Oregon	175,000	188,000	156,000	213.00	175.00
California	321,500	267,700	284,500	150.00	148.00
United States	803,950	774,650	687,500	183.00	170.00
Pacific Coast:					
Washington:					
Bartlett	141,300	140,800	95,000	154.00	180.00
Other	123,500	138,000	108,000	245.00	172.00
Total	264,800	278,800	203,000	196.00	176.00
Oregon:					
Bartlett	70,000	63,000	41,000	130.00	149.00
Other	105,000	125,000	115,000	268.00	188.00
Total	175,000	188,000	156,000	213.00	175.00
California:					
Bartlett	314,000	259,500	275,000	148.00	142.00
Other	7,500	8,200	9,500	234.00	331.00
Total	321,500	267,700	284,500	150.00	148.00
3 States:					
Bartlett	525,300	463,300	411,000	147.00	154.00
Other	236,000	271,200	232,500	255.00	184.00
Total	761,300	734,500	643,500		

¹Includes unharvested production and harvested not sold (tons): U.S. 1982—1,220, 1982—200. ²All prices.

SOURCES: Production, Crop Production, and Prices, Noncitrus Fruits and Nuts Mid-Year Supplement, SRS, USDA.

Table 20.—Plums and prunes: Production and season-average prices received by growers in principal States, 1982, 1983, and indicated 1984 production

Crop and State	Production			Price per ton ¹	
	1982 ²	1983 ²	1984	1982	1983
	<i>Tons</i>			<i>Dollars</i>	
Prunes and plums: ³					
Michigan	11,000	13,000	12,000	261.00	203.00
Idaho	7,000	6,500	6,400	460.00	276.00
Washington	11,500	14,700	16,000	300.00	161.00
Oregon	37,000	28,000	19,000	185.00	183.00
Total 4 States	66,500	62,200	53,400	252.00	193.00
Dried prunes:					
California	126,000	145,000	4/140,000	679.00	654.00
Plums:					
California	118,500	158,000	210,000	620.00	437.00
United States (fresh basis)	588,200	684,200	683,400		

¹All prices. ²Includes unharvested production and harvested not sold (tons): U.S. 1982-6,000, 1983-5,000. ³Mostly prunes; however, estimates include small quantities of plums in all States. ⁴Dry-fresh ratio is 3 to 1.

SOURCES: Production, Crop Production and Prices, Noncitrus Fruits and Nuts, SRS, USDA.

**Table 21.—U.S exports of selected fresh noncitrus fruits,
by destination, 1981/82-1983/84 season**

Item and season ¹	Europe			Latin America	Taiwan	Hong Kong	Other	Total
	Canada	EC ²	Total					
Metric tons								
Apples:								
1981/82	65,979	16,589	36,004	42,533	37,232	19,328	72,651	273,727
1982/83	42,670	11,909	24,596	37,364	62,748	27,185	78,735	273,298
1983/84	38,855	14,821	26,242	12,449	37,838	23,500	83,476	222,360
Grapes:								
1981/82	80,704	500	1,915	5,375	—	7,158	15,809	110,961
1982/83	77,895	590	1,497	3,656	—	10,241	15,844	109,133
1983/84	89,806	428	918	2,986	—	6,560	11,121	111,391
Pears:								
1981/82	23,638	723	6,441	14,708	—	315	7,125	52,227
1982/83	15,695	172	4,261	7,895	—	95	7,911	35,857
1983/84	17,843	1,380	4,810	2,685	—	135	8,861	34,334

¹Season beginning July 1 for apples and pears; June 1 for grapes. ²Belgium-Luxembourg, France, West Germany, Italy, Netherlands, Greece, United Kingdom, Denmark, and Ireland.

SOURCE: Foreign Agricultural Service, USDA.

**Table 22.—U.S exports of selected canned noncitrus fruits,
by destination, 1981/82-1983/84 season**

Item and season ¹	Europe			Latin America	Japan	Other	Total
	Canada	EC ²	Total				
Metric tons							
Peaches:							
1981/82	15,358	3,259	5,970	5,617	9,725	3,222	39,892
1982/83	11,692	6,521	8,230	2,074	9,586	4,390	35,972
1983/84	5,621	937	1,486	750	4,550	3,489	15,896
Fruit cocktail:							
1981/82	15,942	6,200	10,711	3,366	3,666	10,457	44,142
1982/83	12,560	5,417	9,586	1,614	3,328	11,499	38,587
1983/84	6,608	926	2,001	1,210	2,286	10,792	22,897
Pineapple:							
1981/82	7,676	2,445	3,098	124	545	1,122	12,565
1982/83	8,154	1,336	1,535	192	379	530	10,790
1983/84	7,469	3,442	4,455	152	971	609	13,656
Cherries ³ :							
1981/82	379	85	114	389	1,024	292	2,198
1982/83	742	1,704	1,771	142	695	464	3,814
1983/84	620	80	99	25	731	632	2,107
Apricots:							
1981/82	316	100	139	389	80	300	1,224
1982/83	282	45	72	459	78	377	1,268
1983/84	42	19	29	16	53	174	314
Pears:							
1981/82	563	266	729	265	85	1,220	2,862
1982/83	428	176	345	191	85	1,292	2,341
1983/84	305	99	160	94	55	651	1,265

¹Season beginning July 1 for cherries; June 1 for other canned items. ²Belgium-Luxembourg, France, West Germany, Italy, Netherlands, Greece, United Kingdom, Denmark, and Ireland. ³Excludes Maraschino cherries.

SOURCE: Foreign Agricultural Service, USDA.

Table 23.—Frozen concentrated citrus juices: Florida canners' stocks packs, supplies, and movement, 1981/82-1983/84 seasons

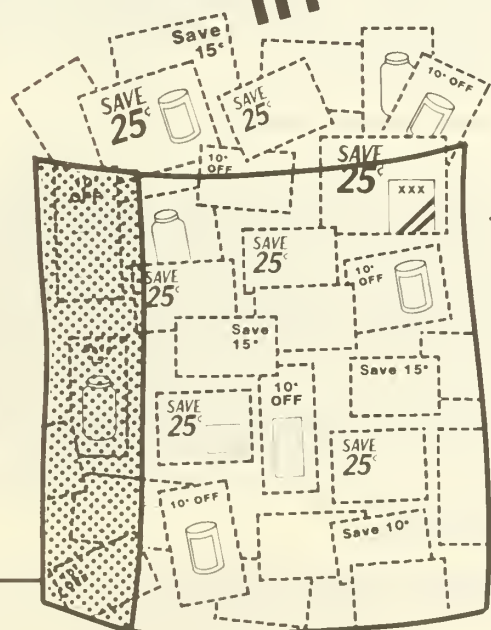
Item and season	Carryin date ¹	Pack		Supply		Movement		Stocks ¹
		To season	Total date ¹	To season	Total date ¹	To season	Total	
1,000 gallons ²								
Orange:								
1981/82	68,987	196,826	214,904	265,813	283,891	164,080	230,512	101,733
1982/83 ³	53,379	205,820	228,423	259,199	281,802	161,130	238,978	98,069
1983/84	42,824	187,032		229,856		162,360		67,496
Grapefruit:								
1981/82	8,404	⁴ 21,885	⁴ 21,902	30,289	30,306	14,220	18,900	16,068
1982/83 ³	11,406	⁴ 14,644	⁴ 15,071	26,050	26,477	14,480	21,028	11,570
1983/84	5,449	⁴ 20,003		25,452		14,870		10,583
Tangerines:								
1981/82	455	⁵ 943	⁵ 943	1,398	1,398	869	1,005	529
1982/83 ³	393	⁵ 457	⁵ 505	850	898	696	791	154
1983/84	107	⁵ 880		987		625		362

¹For the 1983/84 season, week ending August 18; 1982/83 August 13; 1981/82 August 14. These respective dates include data through the 37th week of each season. ²Oranges—42.0 degree brix, Grapefruit—40 degree brix, and Tangerines—42 degree brix. ³The 1982/83 season uncorporate 53 weeks. ⁴Includes receipts of Florida product from non-members and domestic receipts on non-Florida product. ⁵Includes domestic receipts of non-Florida product.

SOURCE: Florida Citrus Processors Association.

SOURCES: Production, Crop Production and Prices, Noncitrus Fruits and Nuts Mid-Year Supplement, SRS, USDA.

Couponing's Growth in Food Marketing



The number of cents-off coupons distributed by manufacturers and retailers skyrocketed between 1965 and 1980, from 10 billion to 90 billion. About 80 percent of U.S. households redeemed coupons in 1979, making coupons the most rapidly growing form of food advertising. This report analyzes the use of coupons by consumers, as a marketing tool by manufacturers and retailers, and in the marketing of farm produce.

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Estimating Retail and Farm Marketing Relationships for U.S. Processed and Fresh Apples

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Abstract: An econometric model of the U.S. apple sector was formulated for the years 1952-81. A system of demand, domestic market allocation, and margin equations was estimated using the two-stage least squares procedure. Retail prices were found to be significantly related to quantity, real per capita expenditures, substitutes, complements, and stocks. The signs of the estimated coefficients in the model agreed with theoretical expectations and their magnitudes were statistically significant. A reduced-form solution to the structural model was derived to show the influence of exogenous variables on product prices, margins, and domestic use.

Keywords: econometric model, elasticity, reduced form, apples, demand, prices.

Introduction

An aggregate econometric model, detailing the allocation and demand components of the U.S. apple sector, is discussed in this article. This model can be used for simulation and forecasting; its structure is hypothesized to have six behavioral equations and four identities. The behavioral equations are (1) total use, (2) allocation to the processing market, (3) retail demand for fresh apples, (4) retail demand for processing apples, (5) fresh market marketing margin, and (6) the processing market marketing margin. The four identities are (1) the fresh market margin, (2) the processing market margins, (3) the market clearing identity, and (4) the total use identity. Quantities allocated, quantities demanded, and prices are determined simultaneously in the system of equations described above and, therefore, the two-stage least squares (2SLS) procedure was used to estimate the theoretical relationships. Structural parameter estimates are based upon annual time series data from the 1952-81 sample period. The empirical results are presented below. All price and expenditure variables are deflated by the consumer price index at the retail level and by the producer price index at the wholesale level.

The Apple Model

Total Use

The total amount of apples used (UTIL), equation (1), is assumed to be a function of the price received by growers for fresh (PPF) and processing (PPR) market apples and the level of production (PROD).¹

Total Apple Use

$$\text{UTIL} = 381.330 + 1.00426 \text{ PROD} + 14.4073 \text{ PPF} + 80.0048 \text{ PPR} \quad (1)$$

(-1.643)	(40.562)	(2.52)	(.785)
	[1.019]	[.252]	[.031]

Apples marketed in both the fresh and processed markets vary directly with the level of production. If the prices of fresh market apples and processing market apples are high at the farm level, only then will marginal quality apples be used. The 2SLS results suggest that there is very little price response with respect to use. This is a likely outcome since higher grower prices may increase the use level of marginal apples that might otherwise be discarded or abandoned. The magnitude of the coefficient for real processor-grower price is five times greater than the coefficient for real fresh market price, suggesting that increases in the processing price are pulling some apples into the processing market that might otherwise be abandoned. This is a reasonable result because grade standards inhibit the use of inferior quality apples in the fresh market.

Processing Market Supply

As noted above, while apples may be supplied to either the fresh or processing markets, low quality apples (as designated by grade standards) prevent free allocation between markets where marketing orders exist; therefore, the flow of apples to fresh markets is presumably limited. However, empirical results suggest the quantity allocated to the processing market does not seem to be significantly influenced by fresh market prices. Allocation of apples to the processing sector (UTPR), equation (2), were found to be significantly influenced by real processed apple price (PPR) and total use (UTIL).

Allocation of Apples to Processing Market

$$\text{UTPR} = -2080.29 + 18.6592 \text{ PPR} + .670013 \text{ UTIL} \quad (2)$$

(-5.558)	(2.190)	(16.306)
	[.84]	[1.695]

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¹Numbers in parentheses are asymptotic *t*-statistics. Numbers in brackets are structural elasticities.

A "myopic" interpretation of the estimated structural parameters indicate that 67 percent of all apples used will be in the processing market; for every 1-cent-per-pound increase in real farm level processing apple price, use in the processing market will increase by nearly 18.6 million pounds.²

Retail Demand

The basic theory underlying the specification of the retail demand for fresh market and processed apples is the familiar neoclassical assumption of utility maximization. An inverse demand function is posited for both markets where the real retail price (RPFAP), equation (3), is a function of the quantity demanded (UTFR), quantity of alternatives demand (USORAN), and real per capita consumer expenditures as a proxy for income (EXP).

$$\text{Retail Demand: Fresh Apple} \quad (3)$$

$$\text{RPFAP} = 19.6204 - .00224205 \text{ UTFR} + .000257315 \text{ USORAN} + 316.528 \text{ EXP}$$

(8.675)	(-3.628)	(1.375)	(3.005)
[.368]	[.061]	[.394]	

An interesting result emerges from the estimated equation: a positive relationship, indicating complementarity, is found between the real retail price of fresh apples and the quantity of oranges produced, which is a proxy for orange or citrus consumption. Some studies (Tomek, Brandow) indicate that oranges and apples are substitutes whereas the results here follow Mathews, Womack, and Huang and suggest that oranges and apples are complements. Apples represent bulk while oranges represent vitamin C, so a complementary relationship is not inconceivable or unlikely. The economic relationship between apples and oranges remains to be settled.

The real retail processing apple price (WPAPSB), equation (4), is a function of the quantity processed (UTPR), other fruit processed (OTHPRC), U.S. Retail Pork Price index (PORIR), real per capita consumer expenditures (EXP), and beginning stocks of canned apples (STCAP).

$$\text{Retail Demand: Processing Apple} \quad (4)$$

$$\text{WPAPSB} = 22.3464 - .00493355 \text{ UTPR} - .000833894 \text{ OTHPRC} + 4.6368 \text{ PORIR}$$

(9.545)	(-4.545)	(-1.642)	(3.585)
[.692]	[-.436]	[.342]	

$$- .00000129255 \text{ STCAP} + 410.628 \text{ EXP}$$

(-2.93)	(1.606)
[.046]	[.507]

In this equation, the wholesale price of applesauce is used as a proxy for the retail processing price. A stock variable is added to reflect the fact that processed apple products are storable across marketing years and, therefore, this equation represents a "retail-wholesale" aggregate specification. Inventories also influence the processor's demand for apples.

The signs of the coefficients conform with economic theory. The real U.S. pork price suggests a complementary relationship (apple sauce is often served with pork)

while other processed fruit is a substitute for processing apples. Beginning stock levels show a negative relationship with real retail price, and real per capita expenditures are positively related with retail price.

Marketing Margins

Marketing margins are defined as the difference between the per unit price paid by the consumer and the price received by the producer (see Tomek and Robinson, 1980, pp. 120-122). In our study, each margin is assumed to be a linear function of the retail price with an intercept since this approach has been described as being an accurate reflection of wholesaler and retailer mark-up behavior for the apple sector (Steadman, 1976).

In our equation specification, the marketing margin for fresh apples (MARFR), equation (5), is a function of the real retail fresh apple price (RPFAP) and the transportation rate index (TRANS).

$$\text{Margin: Fresh Apple} \quad (5)$$

$$\text{MARFR} = 4.56858 + .427 \text{ RPFAP} + .00240189 \text{ TRANS}$$

(3.570)	(6.066)	(4.452)
	[.60]	[.082]

The transportation rate index was included to recognize changes in the transportation industry during the 1970's, particularly with regard to increased fuel costs. The marketing margin for processing apples (MARPR), equation (6), is a function of the real retail price of processing apples (WPAPSB).

$$\text{Margin: Processing Apples} \quad (6)$$

$$\text{MARPR} = .570 + .828 \text{ WPAPSB}$$

[.646]	[15.910]
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All explanatory variables in both equations (5) and (6) have a positive influence on the pertinent dependent variable.

To complete the model, we have the following identities:

$$\text{Production Identity} \quad (7)$$

$$\text{PROD} = \text{UTFR} + \text{UTPR} + \text{OTHPRD}$$

where OTHPRD is the quantity of apples not used in either the fresh or processing market.

Use Identity

$$\text{UTIL} = \text{UTFR} + \text{UTPR} \quad (8)$$

Flexibility and Elasticity Results

The price flexibility estimates for fresh apples indicate an elastic demand at the retail level and less elastic demand at the grower level. The flexibility measure at retail is -.368 and at the grower level, -.742. The elasticity estimates reported below in table 1 are the simple inverse of the flexibility estimates.

²This interpretation is "myopic" since the estimated structural parameters cannot be strictly interpreted out of the context of the entire simultaneous system; to do so may lead to inconsistent results.

Table 1.—Estimated price/expenditure flexibilities and elasticities for fresh and processing apples

Price/expenditure flexibility and elasticity	Fresh apples	Processing apples
Price flexibility retail	-.368	-.692
Demand elasticity retail level ¹	-2.717	-1.445
Price flexibility farm level	-.742	-.863
Demand elasticity farm level ¹	-1.348	-1.1587
Expenditure flexibility retail level	.394	.507
Expenditure elasticity retail: level ¹	1.07	.733
Expenditure flexibility farm: level	.749	.632
Expenditure elasticity farm: level ¹	1.00	.732

¹Represents a lower bound of the elasticity, calculated as reciprocal of the price flexibility. These flexibilities and elasticities are calculated at the mean. Model data will be given in a forthcoming NED staff paper for calculation of point estimates.

Many studies have attempted to measure the elasticity or price flexibility of fresh apples at alternative market levels, but little consensus has been arrived at. Tomek, for example, concludes that the elasticity ranges between -.8 to -.7 at the farm level and between -1.2 to -1.05 at the retail level. Mittelhammer, Price, and Brandow, on the other hand, estimate the elasticity of demand to be lower than Tomek's estimate, ranging from -.596 to -.35, at the grower level. Pasour estimated the intraseasonal demand at the farm level during 3 seasons and finds the elasticity estimates to range from -.35 during July to November to -1.85 during April to June.

Waugh confirms Tomek's inelastic-elastic demand relations at the grower and retail levels. However, Brandow and George and King both find an inelastic demand at the retail market level of -.6 and -.72, respectively. Intraseasonal studies by Eidman, Steadman, Hallberg, and others indicate an elastic demand for fresh market apples at both farm and retail levels. Our results also suggest a somewhat more elastic demand at retail and farm levels relative to earlier works based on annual data.

There appears to be a stronger consensus concerning an elastic demand for processing apples at both the grower and retail levels. Drew, however, estimates the direct elasticities for canning apples at -.73. Tomek finds the direct elasticities for canning apples at -1.21 at the farm level and the elasticity for other processing apples to be -.76. Steadman concludes that the grower level flexibility estimate for processing apples is -.435 (-.57 at the retail level). French determines that the demand for apples is elastic: -1.19 is the direct elasticity estimate. Our flexibility and elasticity results for processing apples are, therefore, consistent with earlier works. A 1-percent change in the quantity demanded produces a .69-percent change in price at the retail level and an .86-percent change in price at the farm level.

Our estimated retail per capita expenditures elasticity for fresh apples is 1.07 and .733 for processing apples. Tomek estimates an income elasticity of 3.42 for canned apples, but finds income not a significant explanatory variable for fresh apples. Waugh found a negative

income flexibility at the farm level (-.16) and a positive flexibility at the retail level (.32) for fresh apples. Our study's income flexibility appears most consistent with Waugh's results.

Results

By solving for the reduced form, each of the predetermined variables is allowed to have an influence on all of the endogenous variables in the model because of simultaneity conditions. Our results show that production level and per capita real expenditures exhibit the strongest influence on apple use and prices. The impact multipliers derived from the restricted reduced form coefficients for production and income are presented in table 2 below. As may be seen, a 100-million-pound increase in total production results in a 95.9-million-pound increase in total use. Approximately 4.1 million pounds of apples will not be used while 40 percent of the increase in production will enter the fresh market and 56 percent will enter the processing market. Apple prices will drop, in absolute level, more at retail than at the farm level. However, because of the less elastic demand at the farm level relative to the retail level, the percentage decline in prices will be greater for farm level prices. In absolute levels, a 100 million pound increase in production results in a .091-, .052-, .27-, and .05-cent per pound decline in retail fresh, farm fresh, retail processing, and farm processing price levels.

An increase of \$100 in per capita real expenditures increases total use and all apple prices. One effect of an expenditure increase is a decrease in use of fresh market apples of nearly 8.23 million pounds. There is a much stronger expenditure effect for processing market apples since total use in processing increases by almost 15.6 million pounds. Of this total, 7.358 million pounds will be from apples that would not otherwise have been used and 8.23 million would be reallocated from the fresh market to the processing market. The largest change in absolute price movement is observed for retail prices. Fresh apple prices increase over 3 cents per pound as do processing apple prices at retail. Farm level prices increase 2 cents per pound for fresh and almost 1 cent per pound for processing market apples.

Table 2.—Selected impact multiplier results

Variable	Production increase of 100 mil. lbs.	Per capita expenditure increase of \$100
<i>Million pounds</i>		
UTIL	95.91	7.358
UTFR	40.39	-8.225
UTPR	55.52	15.583
<i>Cents per pound</i>		
RPFAP	-0.091	.3350
PFR	-0.052	.1919
WPAPS	-0.27	.3338
PPR	-0.047	.0574

Summary and Conclusions

This study conceptualized and estimated an aggregate simultaneous demand model of the U.S. apple sector for simulation and forecasting purposes. Apples were disaggregated into fresh market and processing market quality, and the farm and retail levels were identified. The empirical results indicated that the demand for fresh and processed apples is less elastic at the farm level than at the retail level. Per capita expenditures have a more elastic effect on the demand for fresh apples.

The structural empirical results were then used to derive impact multipliers for selected variables. Of all the exogenous variables, total apple production and real per capita expenditures have the most marked effect on apple prices and quantities used.³

³Full documentation of this model will be available in a forthcoming NED staff report by the authors.

References

- Brandow, G. E. *A Statistical Analysis of Apple Supply and Demand*. Pennsylvania State University, Agricultural Economics and Rural Sociology Paper No. 2, January 1956.
- Drew, W. H. *Demand and Spatial Equilibrium Models for Fresh Apples in the United States*. Unpublished Ph.D. dissertation, Vanderbilt University, January 1961.
- Edman, Victor G. *Retail Demand for Fresh Apples*. Marketing Research Report 952, USDA, ERS, Washington, D.C., April 1972.
- French, B. C. *The Long-Term Price and Production Outlook for Apples in the United States and Michigan*. Michigan State University Technical Bulletin 255, April 1956.
- George, P. S., and G. A. King. *Consumer Demand for Food Commodities in the United States with Projections for 1980*. Giannini Foundation, Monograph No. 26, California Agricultural Experiment Station, University of California, Division of Agricultural Sciences, Giannini Foundation of Agricultural Economics, March 1971.
- Haidacher, R. C., and J. B. Penn. *Some Considerations in Interpreting Elasticities and Flexibilities From Simultaneous Systems*. Unpublished manuscript, Purdue University, February 1974.
- Hallberg, M. C., T. A. Brewer, and D. F. Steadman. *Economics of the Appalachian Apple Industry*. Bulletin 817, The Pennsylvania State University, College of Agriculture, Agricultural Experiment Station, University Park, Pennsylvania, May 1978.
- Houck, James P. "The Relationship Between Direct Price Flexibilities to Direct Elasticities." *Journal of Farm Economics*, Vol. 47, No. 3, August 1965, p. 789-92.
- Mathews, Jim L., Abner W. Womack and Ben W. Huang. "The U.S. Orange Economy: Demand and Supply Prospects 1973/74 to 1984/85." *Fruit Situation*, February 1974, pp. 39-52.
- Pasour, E. C., Jr. "An Analysis of Intraseasonal Price Movements." *Agricultural Economics Research*, January 1965, pp. 19-30.
- Price, David W. and Ronald C. Mittelhammer. "A Matrix of demand Elasticities for Fresh Fruit." *Western Journal of Agricultural Economics*, July 1979, pp. 69-86.
- Steadman, Dennis F. *Optimal Allocation of the Appalachian Apple Crop*. Unpublished M.S. Thesis, The Pennsylvania State University, November 1976.
- Tomek, William G. *An Analysis of the Changes in the Utilization of Apples in the United States*. Cornell University, Agricultural Economics Research 137, December 1963.
- Tomek, William G. *Apples in the United States: Farm Prices and Uses, 1947-75*. Bulletin 1022, Cornell University, Agricultural Experiment Station, New York State College of Agriculture, Ithaca, N.Y., July 1968.
- Tomek, William G. and Kenneth L. Robinson. *Agricultural Product Prices*, Cornell University Press, 1972, Ithaca, New York.
- Waugh, Frederick V. *Demand and Price Analysis—Some Examples From Agriculture*. Technical Bulletin No. 1316, Economic and Statistical Analysis Division, Economic Research Service, USDA, November 1964.

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